

Office Action Summary	Application No.	Applicant(s)	
	10/533,724	FONTIJN, WILHELMUS FRANCISCUS JOHANNES	
	Examiner	Art Unit	
	Tarek Chbouki	2169	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09/19/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Office action has been issued in response to amendment filed on 09/19/2007

Claims 1-21 are pending. Applicants' arguments have been carefully and respectfully considered, but they are not persuasive. Accordingly, this action has been made FINAL necessitated by amendment.

Claims 1-21 have been examined in response to applicant argument filed on 09/19/2007.

Objection to claims 1-2, 5-6 and 8-13 is withdrawn.

Response to Arguments

Below mentioned, are the arguments presented by Applicant and the corresponding Examiner responses:

With respect to Applicant's argument on page 3 indicating that the prior art (US Patent 6377958, Orcutt, Niel) used to Reject of Claims 1-6, 8 and 11-14 does not teach the claimed features in regards to storing or reading an indicator, Examiner respectively disagrees with the precedent assertion since Fig. 2 and 3 of Orcutt indicate that the indicator portion is stored in the partition table 204 and Fig. 5 and 6 indicate the process of reading the partition table and using the indicator to identify the file system and check its status; Therefore, Orcutt discloses the claimed features with respect to storing and reading an indicator which indicates whether the main file system data and virtual file system data are consistent.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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1. Claims 1-14 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 15-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter "a head for at least" which was not described

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in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6,8,11-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Neil Orcutt

(US Patent 6377958)

As per claim 1, Orcutt discloses:

~~Recordable~~— A Recordable record carrier having a user area ~~(UA)~~ for storing user data and a management area ~~(MA)~~ for storing management data,

(Column 12, line 56-57, "one copy of user data and system information stored on disk"), indicates the storage of the user and system data

said management area comprising

a main file system area (70) for storing main file system data (~~mFS~~) of a main file system,

a virtual file system area (71) for storing virtual file system data (~~vFS~~) of a virtual file system in raw format,

(Column 5, line 1-6 "The file system associated with a specific partition of the disk 100 determines the format in which data is stored in the partition, namely, the physical arrangement of user data and of file system structures in the portion of the disk 100 that is delimited by the starting address 302 and the ending address 304 of the partition in question."), In Orcutt invention the file main file system is referred to as advanced file system such as NTFS or ext2 and the virtual file system refer to the one to be convert to, thus it illustrates the storage of the main(original) and virtual(to be converted to) file systems in it format.

and an indicator area (72) for storing an indicator (~~ID~~) indicating whether the main system data (~~mFS~~) and the virtual file system data (~~vFS~~) are consistent.

(Fig. 3, Column 4, line 57-61 "Each partition identifier 204 also includes a system indicator 310. The system indicator 310 identifies the type of file system contained in the partition, which in turn defines the physical arrangement of data that is stored in the partition on the disk") and (Column 10, line 3-6 "The verifying step 404 preferably checks the internal consistency of all redundant copies of system information, in addition to checking the integrity of the system in other ways.) and

(Column 13, lines 18-24, During an identifying step 504, the file system being used in the selected partition is identified by checking the system indicator 310. The system indicator may identify an advanced file system such as NTFS or ext2. However the step 504 may also identify a proprietary or in-progress partition which indicates that partition conversion was interrupted,

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such as a recovery partition indicator), illustrate the identification of the source/target file systems and the storage of the indicator section plus the process of verifying that file systems consistency.

As per claim 2, Orcutt discloses

~~{Record}~~ **The recordable carrier as claimed in claim 1, wherein said virtual file system area (72) comprises a static area for storing static parts of said virtual file system data and a volatile area for storing volatile parts of said virtual file system data (vFS)**

(Column 5, line 1-6 "The file system associated with a specific partition of the disk 100 determines the format in which data is stored in the partition, namely, the physical arrangement of user data and of file system structures in the portion of the disk 100 that is delimited by the starting address 302 and the ending address 304 of the partition in question.") and (Column 10, lines 51-55, The file system structures of the converted (e.g., FAT) partition may be created in volatile memory and then written to disk in one or more writes of entire system structures, or they may be written in pieces as data values are processed), touch base upon the storage of the non-volatile/volatile data of file system .

so that, if the indicator (ID) indicates an inconsistency between the main file system data (mFS) and the virtual file system data (vFS), only the volatile parts of the virtual file system data (vFS) need to be reconstructed from the main file system data (mFS).

(Column 13, line 18-30 "During an identifying step 504, the file system being used in the selected partition is identified by checking the system indicator 310. The system indicator may identify an advanced file system such as NTFS or ext2. However the step 504 may also identify a proprietary or in-progress partition which indicates that partition conversion was interrupted,

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such as a recovery partition indicator. If a recovery partition indicator is present, recovery proceeds by backing out all changes, by continuing the conversion from the last logged checkpoint, or by creating a new set of FAT file system structures without regard to work that may have been done on previously creating such structures in this partition.") indicates the process of reconstructing the file system structure when the indicator catches an anomalies.

As per claim 3, Orcutt discloses:

~~{Record}~~ **The recordable carrier as claimed in claim 1, wherein said indicator (ID) comprises the last update date of the main file system data (mFS) and of the virtual file system data (vFS).**

(Column 11, line 6-12 "During an updating step 414, the boot sector is updated. In particular, the partition table 200 is updated to make the system indicator 310 indicate the type of FAT file system created, rather than indicating an NTFS system. This completes the conversion, since it causes the operating system to treat the converted partition as a FAT partition, rather than an NTFS or ext2 partition") and (Column 19, line 40-41 "The dates and FAT-style file attributes are converted to FAT directory format and added to the entry touches base upon the update process of the system indicator including the dates.

As per claim 4, Orcutt discloses:

~~{Record}~~ **The recordable carrier as claimed in claim 1, wherein said indicator (ID) comprises a flag which is set when the virtual file system data (vFS) are updated, indicating that the virtual file system data (vFS) are valid, and which is reset when the main file system data (mFS) are updated independently, indicating that the virtual file system data (vFS) are invalid.**

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(Column 7, line 49-64 "Inventive systems include at least one computer having a processor in operable connection with a memory, and a partitionable storage medium having at least one partition. The partition is identified by file system identification information such as a partition table system indicator. The partition contains an advanced file system which is accessible for manipulation by use of the processor. The system is configured to perform a method to at least attempt conversion of an advanced file system to a simpler file system: checking for at least one preventive condition in the advanced file system that prevents completion of a file system conversion from the advanced file system to the simpler file system; discontinuing an attempted file system conversion without completing it if such a preventive condition is found; and completing the file system conversion if no such preventive condition is found."), touches base upon the determination of the validity of the file system in order to conduct the conversion process.

As per claim 5, Orcutt discloses

~~(Record)~~ The recordable carrier as claimed in claim 1, wherein said indicator area (72) is present in an easily accessible location, in particular in a disk navigation area (~~DN~~), in a logical volume integrity descriptor (~~LVID~~), or in a chip in the record carrier (7).

(Column 4, lines 31-40, As shown in FIG. 2, one version of an IBM-compatible partition table 200 includes an Initial Program Loader ("IPL") identifier 202, four primary partition identifiers 204, and a boot identifier 206. As shown in FIG. 3, each partition identifier 204 includes a boot indicator 300 to indicate whether the partition in question is bootable. At most one of the partitions in the set of partitions defined by the partition table 200 is bootable at any given time

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but "boot management" tools are commercially available to facilitate booting from different partitions, illustrate the storage and accessibility of the indicator portion).

As per claim 6, Orcutt discloses:

~~(Record)~~ The recordable carrier as claimed in claim 1, wherein said virtual file system area (74) further comprises a directory area for storing the directory structure of the virtual file system.

(Colum 10, line 46-55 "A file system structure creating step 410 creates file system structures for the simpler file system, based on the data values in the advanced file system structures and the feature determinations. For instance, FAT file allocation tables and a FAT root directory may be created from NTFS file system structures. The file system structures of the converted (e.g., FAT) partition may be created in volatile memory and then written to disk in one or more writes of entire system structures, or they may be written in pieces as data values are processed.") indicates the process of storing the file system directory structure.

As per claim 8, Orcutt discloses

~~(Recording)~~ A recording apparatus for recording information on a recordable record carrier (7) having a user area (UA) for storing user data and a management area (MA) for storing management data,

(Column 3, line 65 "the distinction between system and user areas") illustrate the presence of system and use areas.

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said apparatus comprising

- recording means ~~(6)~~ for recording main file system data ~~(mFS)~~ of a main file system in a main file system area ~~(70)~~ of said management area (MA),

(Column 12, line 56-57, "at least one copy of user data and system information stored on disk")

and (Column 3, line 65 "the distinction between system and user areas") illustrate the storage of the system data.

virtual file system data ~~(vFS)~~ of a virtual file system in raw format in a virtual file system area

~~(71)~~ of said management area (MA),

Column 19, line 34-37 "The module 614 then creates an empty FAT in the computer's memory and at the beginning of the partition. The code 624 descends the directory tree in the source file system, reading each directory entry.") touches base upon the concept of recording the file system.

and an indicator ~~(ID)~~ indicating whether the main file system data ~~(mFS)~~ and the virtual file system data ~~(vFS)~~ are consistent in an indicator area ~~(72)~~ of said management area (MA),

Column 4, line 57-61 "Each partition identifier 204 also includes a system indicator 310. The system indicator 310 identifies the type of file system contained in the partition, which in turn defines the physical arrangement of data that is stored in the partition on the disk") and (Column 10, line 3-6 "The verifying step 404 preferably checks the internal consistency of all redundant copies of system information, in addition to checking the integrity of the system in other ways.) illustrate the storage of of the indicator section plus the process of verifying that file systems data are consistent.

- reading means ~~(6)~~ for reading said user data and said management data,

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(Column 26, 38-40 "The computer 602 is capable of using one or more floppy drives, tape drives, optical drives and/or other means to read a storage medium.") illustrates the reading process of the storage media containing user data.

memory means (8) for storing said virtual file system data (vFS) ,

(Column 10, line 4653 "A file system structure creating step 410 creates file system structures for the simpler file system, based on the data values in the advanced file system structures and the feature determinations. For instance, FAT file allocation tables and a FAT root directory may be created from NTFS file system structures. The file system structures of the converted (e.g., FAT) partition may be created in volatile memory") indicates the memory storage form of the file system.

conversion means (9) for converting said main file system data (mFS) into said virtual file system data (vFS) and vice versa for storage on the record carrier (7)

(Column 6, line 20-33 "Conversion from a simpler file system, such as a FAT file system, to a more complex or advanced file system, such as NTFS or HPFS or AFS, is relatively straightforward because one starts with source file system whose features are a subset or special case of the target file system's features. By contrast, converting from a more advanced file system to a simpler file system--and doing so in-place, safely, and efficiently--requires new tools and techniques. Thus, it would be an advancement in the art to provide improved tools and techniques for file system conversion, such as systems and methods for converting NTFS partitions to FAT format in-place without destroying user data. Such tools and techniques are disclosed and claimed herein."), illustrates the conversion process.

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and/or for output to an external host device ~~(2, 3)~~ if said indicator ~~(ID)~~ indicates an inconsistency between the main file system data ~~(mFS)~~ and the virtual file system data ~~(vFS)~~,

and an interface ~~(4, 5)~~ for communicating with a host device ~~(2, 3)~~.

(Column 18, line 44-49 "A piece of user interface code 620 displays options and status (including, e.g., any error/warning messages); obtains user commands, preferences, and selections; provides assistance in the form of help files or wizards, and otherwise facilitates use of the invention. As noted, the user interface 620 may permit remote control of the main routine 616 over a computer network."), illustrates the use of an external host in order to conduct a remote control procedure.

As per claim 11, Orcutt discloses

~~(Recording)~~ **A recording method for recording information on a recordable record carrier ~~(7)~~ having a user area ~~(UA)~~ for storing user data and a management area ~~(MA)~~ for storing management data,**

(Column 3, line 65 "the distinction between system and user areas") illustrate the presence of system

and use areas.

said method comprising the steps acts of:

- reading main file system data ~~(mFS)~~ of a main file system stored

(Column 26, 38-40 "The computer 602 is capable of using one or more floppy drives, tape drives, optical drives and/or other means to read a storage medium.") illustrates the reading process of the storage media containing system data.

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in a main file system area (70) of said management area (MA) ,

- converting said main file system data (mFS) into said virtual file system data (vFS) for storage on the record carrier (7) and/or for output to an external host device (2,3),

(Column 6, line 20-33 "Conversion from a simpler file system, such as a FAT file system, to a more complex or advanced file system, such as NTFS or HPFS or AFS, is relatively straightforward because one starts with source file system whose features are a subset or special case of the target file system's features. By contrast, converting from a more advanced file system to a simpler file system--and doing so in-place, safely, and efficiently--requires new tools and techniques. Thus, it would be an advancement in the art to provide improved tools and techniques for file system conversion, such as systems and methods for converting NTFS partitions to FAT format in-place without destroying user data. Such tools and techniques are disclosed and claimed herein.") and (Column 18, line 44-49 "A piece of user interface code 620 displays options and status (including, e.g., any error/warning messages); obtains user commands, preferences, and selections; provides assistance in the form of help files or wizards, and otherwise facilitates use of the invention. As noted, the user interface 620 may permit remote control of the main routine 616 over a computer network."), illustrates the conversion process and use of an external host for remote control.

storing said virtual file system data (vFS) in a virtual file system area (71) of said management area (MA) in raw format, storing an indicator (ID) indicating whether the main system data (mFS) and the virtual file system (8) data (vFS) are consistent in an indicator area (72) of said management area (MA) .

Column 4, line 57-61 "Each partition identifier 204 also includes a system indicator 310. The system indicator 310 identifies the type of file system contained in the partition, which in turn defines the physical arrangement of data that is stored in the partition on the disk") and (Column

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10, line 3-6 "The verifying step 404 preferably checks the internal consistency of all redundant copies of system information, in addition to checking the integrity of the system in other ways.) illustrate the storage of the indicator section plus the process of verifying that file systems data are consistent.

As per claim 12, Orcutt discloses

(Recording) A recording method for recording information on a recordable record carrier (7) having a user area (UA) for storing user data and a management area (MA) for storing management data,

(Column 3, line 65 "the distinction between system and user areas") illustrate the presence of system and use areas.

said method comprising the (steps) acts of:

- reading an indicator (ID), which indicates whether main file system data (mFS) of a main file system stored in a main file system area (70-) of said management area (MA)

(Column 4, line 57-61 "Each partition identifier 204 also includes a system indicator 310. The system indicator 310 identifies the type of file system contained in the partition, which in turn defines the physical arrangement of data that is stored in the partition on the disk"), illustrates the system indicator concept.

and virtual file system data (vFS) of a virtual file system stored in raw format in a virtual file system area (74) are consistent, from an indicator area (72) of said management area (MA) ,

(Column 10, line 3-6 "The verifying step 404 preferably checks the internal consistency of all redundant copies of system information, in addition to checking the integrity of the system in

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other ways.) illustrate the storage of the indicator section plus the process of verifying that file systems data are consistent.

- reading said main file system data (~~mFS~~) from said main file system area (~~70~~) and reconstructing at least part of said virtual file system data (~~vFS~~) from said main file system data (~~mFS~~) if said indicator (~~ID~~) indicates an inconsistency,

(Column 13, line 18-30 "During an identifying step 504, the file system being used in the selected partition is identified by checking the system indicator 310. The system indicator may identify an advanced file system such as NTFS or ext2. However the step 504 may also identify a proprietary or in-progress partition which indicates that partition conversion was interrupted, such as a recovery partition indicator. If a recovery partition indicator is present, recovery proceeds by backing out all changes, by continuing the conversion from the last logged checkpoint, or by creating a new set of FAT file system structures without regard to work that may have been done on previously creating such structures in this partition.") illustrates the roll back of the conversion process if an error is encountered.

- reading at least part of said virtual file system data (~~vFS~~) from said virtual file system area (~~71~~), and -exposing the virtual file system data (~~vFS~~) to an external host device (~~2~~) .

(Column 10, line 46-55 "A file system structure creating step 410 creates file system structures for the simpler file system, based on the data values in the advanced file system structures and the feature determinations. For instance, FAT file allocation tables and a FAT root directory may be created from NTFS file system structures. The file system structures of the converted (e.g., FAT) partition may be created in volatile memory and then written to disk in one or more writes of entire system structures, or they may be written in pieces as data values are processed.") and (Column 18, line 44-49 "A piece of user interface code 620 displays options and status

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(including, e.g., any error/warning messages); obtains user commands, preferences, and selections; provides assistance in the form of help files or wizards, and otherwise facilitates use of the invention. As noted, the user interface 620 may permit remote control of the main routine 616 over a computer network.”), illustrate the process of reading file system and the use of an external host in order to conduct a remote control procedure.

As per claim 13, Orcutt discloses

(~~Recording~~) A recording method as claimed in claim 12, further

comprising the steps acts of:

- setting the indicator (~~ID~~) such that it indicates an inconsistency if the virtual file system data (~~vFS~~) and/or the main file system data (~~mFS~~) are changed,

(Column 4, line 57-61 “Each partition identifier 204 also includes a system indicator 310. The system indicator 310 identifies the type of file system contained in the partition, which in turn defines the physical arrangement of data that is stored in the partition on the disk”)

(column 7, line 49-64 “Inventive systems include at least one computer having a processor in operable connection with a memory, and a partitionable storage medium having at least one partition. The partition is identified by file system identification information such as a partition table system indicator. The partition contains an advanced file system which is accessible for manipulation by use of the processor. The system is configured to perform a method to at least attempt conversion of an advanced file system to a simpler file system: checking for at least one preventive condition in the advanced file system that prevents completion of a file system

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conversion from the advanced file system to the simpler file system; discontinuing an attempted file system conversion without completing it if such a preventive condition is found; and completing the file system conversion if no such preventive condition is found.”) , illustrates the process of determining file system constancy.

And - storing the set indicator (4D) in said indicator area (72).

(Column 4, line 57-61 “Each partition identifier 204 also includes a system indicator 310. The system indicator 310 identifies the type of file system contained in the partition, which in turn defines the physical arrangement of data that is stored in the partition on the disk”) touches base on the system indicator storage.

As per claim 14, Orcutt discloses:

(Currently Amended) Computer-A computer readable medium embodying a computer program, the computer program comprising computer program means for causing a computer to perform the steps—acts of the method as claimed in claim ii when said computer program is run on -a- the computer.

(Column 11, line 42-The system 600 includes at least one computer 602 which has a processor 604 for executing program instructions, a memory 606 for storing program instructions and data,” illustrates the program concept running on a computer.

As per claim 15, Orcutt discloses:

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(New) A device comprising:

a head for at least one of reading from and writing on a first memory at least one of main data and virtual data;

(Column 11, lines 51-54, memory 606 and the partitionable storage medium 608 can be written and read by execution of appropriate processor 604 instructions, direct memory access, or other familiar means).

a converter configured to read an indicator from the removable memory and to convert main data to virtual data if the indicator indicates an inconsistency between the main data and the virtual data, and otherwise read the virtual data;

(Fig. 5, Column 7, lines 52-64, The partition is identified by file system identification information such as a partition table system indicator. The partition contains an advanced file system which is accessible for manipulation by use of the processor. The system is configured to perform a method to at least attempt conversion of an advanced file system to a simpler file system: checking for at least one preventive condition in the advanced file system that prevents completion of a file system conversion from the advanced file system to the simpler file system; discontinuing an attempted file system conversion without completing it if such a preventive condition is found; and completing the file system conversion if no such preventive condition is found, indicate the filesystem conversion after checking the its status for integrity).

and a second memory for storing the virtual data.

(Column 1, lines 44-48, Optical or cubical disks may be accessed by other means, such as photoemitters or photoreceptors, and flash memory or other memory disks are accessed by electronic circuits familiar to those of skill in the art, indicate the use of a flash memory to store data).

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As per claim 16, Orcutt discloses:

(New) The device of claim 15, wherein the virtual data includes a static part and a volatile part,

(Column 5, line 1-6 "The file system associated with a specific partition of the disk 100 determines the format in which data is stored in the partition, namely, the physical arrangement of user data and of file system structures in the portion of the disk 100 that is delimited by the starting address 302 and the ending address 304 of the partition in question.") and (Column 10, lines 51-55, The file system structures of the converted (e.g., FAT) partition may be created in volatile memory and then written to disk in one or more writes of entire system structures, or they may be written in pieces as data values are processed), touche base upon the storage of the non-volatile/volatile data of file system

and wherein only the volatile part is reconstructed from the main data based on the indicator

(Column 13, line 18-30 "During an identifying step 504, the file system being used in the selected partition is identified by checking the system indicator 310. The system indicator may identify an advanced file system such as NTFS or ext2. However the step 504 may also identify a proprietary or in-progress partition which indicates that partition conversion was interrupted, such as a recovery partition indicator. If a recovery partition indicator is present, recovery proceeds by backing out all changes, by continuing the conversion from the last logged checkpoint, or by creating a new set of FAT file system structures without regard to work that may have been done on previously creating such structures in this partition.") indicates the process of reconstructing the file system structure when the indicator catches an anomalies.

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As per claim 17, Orcutt discloses:

(New) The device of claim 15, wherein the indicator comprises last update dates of the main data and of the virtual data.

(Column 11, line 6-12 "During an updating step 414, the boot sector is updated. In particular, the partition table 200 is updated to make the system indicator 310 indicate the type of FAT file system created, rather than indicating an NTFS system. This completes the conversion, since it causes the operating system to treat the converted partition as a FAT partition, rather than an NTFS or ext2 partition") and (Column 19, line 40-41 "The dates and FAT-style file attributes are converted to FAT directory format and added to the entry touches base upon the update process of the system indicator including the dates.

As per claim 18, Orcutt discloses:

(New) The device of claim 15, wherein the indicator comprises a flag which is set when the virtual data are updated, indicating that the virtual data are valid,

(Column 7, line 49-64 "Inventive systems include at least one computer having a processor in operable connection with a memory, and a partitionable storage medium having at least one partition. The partition is identified by file system identification information such as a partition table system indicator. The partition contains an advanced file system which is accessible for manipulation by use of the processor. The system is configured to perform a method to at least attempt conversion of an advanced file system to a simpler file system: checking for at least one preventive condition in the advanced file system that prevents completion of a file system conversion from the advanced file system to the simpler file system; discontinuing an attempted file system conversion without completing it if such a preventive condition is found; and completing the file system conversion if no such preventive condition is found."), touches base

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upon the determination of the validity of the file system in order to conduct the conversion process.

and which is reset when the main data are updated independently, indicating that the virtual file system data are invalid.

(Fig 5 and column 13, lines 18-20, During an identifying step 504, the file system being used in the selected partition is identified by checking the system indicator 310 and lines and lines 33-36, During a checking step 506, the file system status is checked to determine whether the system 600 is in a known state, that is, a state in which necessary assumptions about file system structures hold true. Illustrates the the cleanup process/reset when an invalid condition is encountered).

As per claim 19, Orcutt discloses:

(New) The device of claim 15, wherein the indicator is stored in at least one of a disk navigation area of the first memory,

(Column 4, lines 31-40, As shown in FIG. 2, one version of an IBM-compatible partition table 200 includes an Initial Program Loader ("IPL") identifier 202, four primary partition identifiers 204, and a boot identifier 206. As shown in FIG. 3, each partition identifier 204 includes a boot indicator 300 to indicate whether the partition in question is bootable. At most one of the partitions in the set of partitions defined by the partition table 200 is bootable at any given time but "boot management" tools are commercially available to facilitate booting from different partitions, illustrate the storage and accessibility of the indicator portion).

a logical volume integrity descriptor of the first memory,

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(Column 4, lines 31-40, As shown in FIG. 2, one version of an IBM-compatible partition table 200 includes an Initial Program Loader ("IPL") identifier 202, four primary partition identifiers 204, and a boot identifier 206. As shown in FIG. 3, each partition identifier 204 includes a boot indicator 300 to indicate whether the partition in question is bootable. At most one of the partitions in the set of partitions defined by the partition table 200 is bootable at any given time but "boot management" tools are commercially available to facilitate booting from different partitions, illustrate the storage and accessibility of the indicator portion).

and a chip in the first memory.

(Column 1, lines 44-48, Optical or cubical disks may be accessed by other means, such as photoemitters or photoreceptors, and flash memory or other memory disks are accessed by electronic circuits familiar to those of skill in the art, indicate the use of a flash memory to store data).

As per claim 20, Orcutt discloses:

(New) The device of claim 15, wherein the first memory is a removable memory.

(Column 1, lines 44-48, Optical or cubical disks may be accessed by other means, such as photoemitters or photoreceptors, and flash memory or other memory disks are accessed by electronic circuits familiar to those of skill in the art, indicate the use of a flash memory to store data).

As per claim 21, Orcutt discloses:

21.(New) The device of claim 20, wherein the indicator is stored upon an unmount command of the removable memory.

(Column 1, lines 44-48, Optical or cubical disks may be accessed by other means, such as

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photoemitters or photoreceptors, and flash memory or other memory disks are accessed by electronic circuits familiar to those of skill in the art, indicate the use of a flash memory to store data).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orcutt, in view of Moore Christopher S et al (US Patent 6895490)

As per claim 7, Orcutt discloses:

wherein said virtual file system is a File Allocation Table (~~FAT~~) file system

(Column 6, line 20-21 "Conversion from a simpler file system, such as a FAT file system, to a more complex or advanced file system."), indicates the fact that the virtual file system is a FAT.

However, Orcutt does not explicitly disclose

wherein said main file system is a Universal Disc Format (~~UDF~~) file system,

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On the other hand, Moore in an analogous art discloses **file system is a Universal Disc Format (UDF) file system** (Column 1, line 24-25 "such as ISO9660 and Universal Disk Format (UDF), are used.").

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to incorporate the teaching of Moore into the method of Orcutt. One having ordinary skill in the art would have found it motivated to use the **Universal Disc Format (UDF) file system**, format of Moore into the system of Orcutt for the purpose of enabling the system conversion process to include a wide variety of storage device format.

As per claim 9, Orcutt discloses:

The recording apparatus as claimed in claim 8, wherein said recording means (6) and said reading means (6) are adapted for accessing an optical disk (7), (Column 26, line 38-42 "The computer 602 is capable of using one or more floppy drives, tape drives, optical drives and/or other means to read a storage medium. A suitable storage medium includes a magnetic, optical, or other computer-readable storage device having a specific physical substrate configuration."), illustrates the access of an optical disk derives.

and wherein said interface (4) is adapted for communicating with a compact flash form factor drive (2) using a file allocation table system

(Column 26, line 42-52 "Suitable storage devices include floppy disks, hard disks, tape, CD-ROMs, DVDs, PROMs, RAM, flash memory and other computer system storage devices. The substrate configuration represents data and instructions which cause the computer system to

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operate in a specific and predefined manner as described herein. Thus, the medium tangibly embodies a program, functions, and/or instructions that are executable by the standalone machines, servers and/or network client computers to perform file system conversion steps of the present invention.”), Since the Orcutt invention talks about converting simple File system such as FAT to a more advanced file system, it illustrates the fact that the interface is adapted to communicate with a memory flash device using a File allocation table file system.

However, Orcutt does not explicitly disclose:

in particular a small form factor optical disk using a universal disc format,

But on the other hand, Moore in an analogous art discloses **file system is a Universal Disc Format (UDF) file system** (Column 1, line24-25 “such as ISO9660 and Universal Disk Format (UDF), are used.”).

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to incorporate the teaching of Moore into the method of Orcutt. One having ordinary skill in the art would have found it motivated to use the **Universal Disc Format (UDF) file system**, format of Moore into the system of Orcutt for the purpose of enabling the system conversion process to include a wide variety of storage device format.

As per claim 10, Orcutt substantially disclosed the invention as claimed

However, Orcutt does not explicitly disclose **MRAM unit memory means** but on the other hand, Moore in an analogous art discloses the **MRAM unit memory means** (Column 7, line 45-48 “the memory array comprises a semiconductor material. Other materials can be used, such as,

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but not limited to, phase-change materials and amorphous solids as well as those used with MRAM").

Therefore, it would have been obvious to a person in the ordinary skill in the art at the time of the invention to incorporate the teaching of Moore into the method of Orcutt. One having ordinary skill in the art would have found it motivated to use the **MRAM unit memory means** of Moore into the system of Orcutt for the purpose of enabling the system conversion process to include a wide variety of storage device format.

5. Conclusion

As necessitated by amendment, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarek Chbouki whose telephone number is 571-2703154. The examiner can normally be reached on Mon-Fri 7:30 am to 5:00 pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chace Christian can be reached on 571-2724190. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application

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Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR

CANADA) or 571-272-1000.


Tarek Chbouki

TC

Patent Examiner

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11/28/2007



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